UTAH FATAL CRASH ANALYSIS

1973 - 1980

UTAH DEPARTMENT OF PUBLIC SAFETY
HIGHWAY SAFETY DIVISION
455 EAST 400 SOUTH
SALT LAKE CITY, UTAH 84111
(801) 533-5286

MAY 15, 1981

BY

ARLENE STRATE
ROY BYRD Ph.D.

1980 Utah Fatal Crash Analysis

TABLE OF CONTENTS

I. OVERALL SUMMARY 1

Projections 1

II. FATAL ACCIDENT SUMMARY 5

III. GEOGRAPHIC SUMMARY 6

City/County/Totals 6
Road Types 7

IV. ACCIDENT SUMMARY 8

Vehicle Types 8
Residence 8
Day of Week 8
Time of Day 9
Environmental Conditions 9

V. PERSON SUMMARY 11

Drivers Age 11
Passengers 11
Pedestrians 12
Bicyclists 13
Motorcyclists 14
Seatbelts 14

VI. DRIVER CONTRIBUTING FACTORS 15

Summary 15
Speeding 15
Alcohol 16
Reckless Driving 17
Failure to Yield 18

I. OVERALL SUMMARY

The analysis results are derived from fatal accident data that is coded, keypunched, edited and maintained by the Utah Highway Safety Program Office. The following is a summary of Utah's fatal accident profile: For the 1980 calendar year, there were 292 fatal crashes which resulted in 335 deaths. This is a 2.1% increase in the number of deaths over the calendar year 1979, which totaled 287 crashes and 328 deaths (table one). Accidents involving trucks over 10,000 decreased by 10% in 1980 while motorcycle accidents increased by 30% over the previous year. During 1980, the number of fatalities increased by 2.1% while the average daily traffic on Utah's highways increased by 1%.

Projections

The most immediate factor effecting highway safety in Utah in 1980 is the availability and costs of fuel. The 55 mph speed limit was implemented in 1974, along with the then existent energy crisis. The greatest reductions in the fatality rate occurred on the interstate, federal-aid primary and the urban federal-aid systems. Therefore, it is reasonable to conclude that the greatest reductions in fatal crash incidence have occurred on these systems since 1974. The effects of future increases in speeds and speed variation will most likely occur on these road systems. That is, any future increases in speeds will result in increased fatalities, both urban and rural, on the interstate and federal-aid systems.

Talk of shortages and higher prices is expected to continue receiving news media attention throughout 1981. No significant changes in traffic deaths are expected in 1981 over previous years. Overall travel in the state is not expected to increase over 1980 and speed enforcement as a means of reducing energy consumption and improving safety will receive

continued emphasis throughout 1981. Such enforcement will undoubtedly impact crash severity and the resulting numbers of fatalities. Increased use of passive restraints in the future will decrease injury severity. However, the introduction and use of smaller vehicles, for conservation purposes, will increase crash injury severity. It has been demonstrated that the likelihood of severe or fatal injury as the result of a traffic crash is about twice as great for occupants of a small vehicle as for occupants of a large vehicle, regardless of the type of impact (roll-over, car, truck, etc.). Increases in pedestrian, bicycle and motorcycle travel to conserve energy will also contribute to increased injury severity in traffic crashes.

Indicators of the highway safety problem in Utah show increasing trends over the long run. The population of the state is growing, and is expected to increase to 1.66 million by 1985. Accordingly, the number of licensed drivers will increase from 900,000 in 1980 to 1.1 million in 1985. The number of registered vehicles exceeded 1 million in 1980, and will increase to 1.4 million in 1985. The vehicle miles in 1980 was about 10.8 billion, and will increase to about 12.3 billion in 1985. In 1980, there were 11,701 injury accidents with 17,828 injuries in the state. This number can be expected to increase in excess of 16 thousand by 1985 and injuries increase in excess of 24,000 (Table One). The numbers of fatal accidents will increase to approximately 340 in 1985, with more than 390 fatalities. Further, the incidence of injury will increase in the long run, but the severity of injuries will decrease, on the average, in the coming years. This means that the fatality rate will remain constant, or decrease slightly.

Table One

Utah Accidents

1947 - 1980

Year	Total Accidents	Fatal-ities	Injur-ies	Number of Accidents Fatal	Number of Accidents Injury	Mil. Veh. Miles	Death Rate Per 100 Mil. Veh. Miles	Fatal Acc. Rate Per 100 Mil. Veh. Miles	Injury Rate Per 100 Mil. Veh. Miles	Total Acc. Rate Per 100 Mil. Veh. Miles
1947	8,885	186	3,747	159	2,603	2,132	8.72	7.46	176	4.17
1948	9,961	220	3,982	169	2,675	2,351	9.36	7.19	169	4.24
1949	11,092	174	3,808	151	2,614	2,475	7.03	6.10	154	4.48
1950	12,705	188	4,459	169	3,004	2,839	6.62	5.95	157	4.48
1951	16,475	207	5,132	174	3,495	3,015	6.87	5.77	170	5.46
1952	17,710	246	5,140	184	3,474	3,050	8.07	6.03	169	5.81
1953	16,373	209	4,945	185	3,305	3,232	6.47	5.72	153	5.07
1954	15,103	209	4,495	176	3,016	3,336	6.27	5.28	135	4.53
1955	18,060	203	5,036	166	3,390	3,075	6.60	5.40	164	5.87
1956	17,531	215	4,812	176	3,310	3,310	6.50	5.32	145	5.30
1957	19,054	222	5,022	181	3,397	3,366	6.60	5.38	149	5.66
1958	22,220	193	5,658	171	3,762	3,531	5.47	4.84	160	6.29
1959	23,506	205	5,992	171	3,946	3,784	5.42	4.52	158	6.21
1960	26,478	256	9,128	200	5,576	3,852	6.65	5.20	237	6.87
1961	25,732	236	10,412	197	6,257	3,997	5.90	4.93	261	6.44
1962	26,613	233	11,133	186	6,968	4,240	5.50	4.34	263	6.28
1963	27,340	263	12,603	198	7,798	4,549	5.78	4.35	277	6.01
1964	29,452	295	14,096	246	8,636	4,790	6.17	5.14	294	6.15
1965	29,525	281	14,361	242	8,856	4,997	5.62	4.84	287	6.91
1966	29,957	331	14,994	265	9,076	5,079	6.52	5.22	295	5.90
1967	30,992	275	14,401	231	8,888	5,257	5.24	4.39	274	5.90
1968	34,532	289	15,539	258	9,550	5,539	5.22	4.66	281	6.23
1969	34,766	308	15,977	251	9,850	5,802	5.31	4.33	275	5.99
1970	35,166	335	17,076	276	10,722	6,108	5.49	4.52	280	5.76
1971	39,108	337	18,073	280	11,399	6,544	5.15	4.28	276	5.98
1972	39,856	382	18,261	312	11,630	6,969	5.48	4.48	262	5.72
1973	38,234	361	18,415	304	11,710	7,274	4.96	4.18	253	5.26
1974	31,401	228	16,268	204	10,560	7,457	3.06	2.74	218	4.21
1975	36,426	274	17,762	245	11,441	7,942	3.45	3.09	224	4.58
1976	34,345	254	18,315	225	11,685	8,420	3.02	2.67	218	4.08
1977	38,524	360	19,728	310	12,652	9,054	3.98	3.42	218	4.26
1978	42.684	376	21,029	315	13,423	9,826	3.83	3.21	214	4.34
1979	40,468	328	20,798	287	13,449	9,811	3.34	2.93	212	4.12
1980	33,582	335	17,828	292	11,701	10,815*	3.10*	2.70*	192*	3.11*

*Estimated

TABLE TWO

CUMULATIVE NUMBER OF FATAL ACCIDENTS
Number Killed

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	DEATHS PER 100 MILLION VEHICLE MILES TRAVELED
1972	26 31	44 53	71 89	84 104	110 135	136 165	170 207	204 251	235 288	261 317	276 342	312 382	5.48
1973	21 25	32 36	61 72	85 102	117 138	144 169	176 218	206 253	230 280	261 317	282 339	303 361	4.96
1974	6 6	9 9	18 18	41 41	65 72	87 96	110 123	126 139	149 166	174 196	192 215	204 228	3.06
1975	18 21	33 41	42 52	54 67	78 91	106 125	131 150	161 183	184 209	208 233	227 255	245 274	3.45
1976	20 22	45 55	58 69	69 80	88 103	102 119	134 155	153 176	173 198	195 221	210 238	225 254	3.02
1977	19 21	37 41	60 65	78 86	104 115	135 148	172 195	204 242	229 272	260 309	283 333	310 360	3.98
1978	12 14	30 33	51 54	75 82	97 105	131 146	176 204	209 252	243 295	272 327	298 358	315 376	3.83
1979	25 26	38 40	61 65	88 95	111 121	137 148	168 181	196 213	227 256	243 275	266 305	287 328	3.34
1980	18 20	31 34	53 59	79 90	103 117	132 147	159 182	185 211	214 242	242 275	267 309	292 335	3.10*

Cumulative difference between previous year and current year: Number Killed

-6	-6	-6	-5	-4	-1	+1	-2	-14	0	+4	+7

* Estimated

II. FATAL ACCIDENT SUMMARY

TABLE THREE

Fatal Accident Summary

	1979		1980	
	Accidents	Fatalities	Accidents	Fatalities
Drivers Involved	395	159	406	173
Passengers	317	92	355	105
Pedestrians	68	70	47	49
Motorcycle	30	31	39	44
Bicycle	7	7	7	7
Trucks over 10,000 GVW	46	53	41	50
Pickup	77	92	77	93

III. GEOGRAPHIC SUMMARY

City/County/Totals

Geographically, Utah's fatal crashes have been concentrated along the Wasatch Front. In 1980, 24% of all fatal crashes occurred in ten major cities on the Wasatch Front.

TABLE FOUR

Fatal Crashes by City

City	1973	1974	1975	1976	1977	1978	1979	1980
Granger	6	3	2	1	4	4	2	2
Kearns	2	0	2	2	3	2	2	0
Midvale	4	4	4	5	0	1	3	1
Murray	3	2	1	4	7	5	2	8
Ogden	7	8	7	11	18	10	10	5
Orem	3	2	1	3	2	4	5	2
Provo	7	3	3	5	2	7	1	7
Salt Lake City	33	18	28	33	33	33	31	40
Sandy	6	2	2	2	0	5	2	4
South Salt Lake	5	4	3	1	5	5	5	2
% of Total State Fatal Crashes in Ten Cities	(25%)	(23%)	(22%)	(30%)	(24%)	(24%)	(22%)	(24%)

In 1980, 73% of all fatal crashes occurred in ten counties:

TABLE FIVE

Fatal Crashes by County

County	1973	1974	1975	1976	1977	1978	1979	1980
Box Elder	9	7	7	10	10	12	15	5
Davis	11	5	8	12	12	10	19	12
Iron	9	3	3	3	3	9	3	12
Salt Lake	93	59	76	74	84	100	84	102
Summit	7	3	10	4	10	9	9	11
Tooele	14	6	10	4	13	16	14	7
Uintah	10	7	10	3	11	3	5	12
Utah	29	23	24	25	24	35	33	32
Washington	14	6	5	10	10	3	10	5
Weber	18	19	28	16	32	28	21	16
% of Total State Fatal Crashes	(71%)	(68%)	(74%)	(72%)	(67%)	(71%)	(74%)	(73%)
Salt Lake, Utah & Weber County % of Total State Fatal Crashes	(46%)	(50%)	(52%)	(51%)	(45%)	(52%)	(48%)	(51%)

Road Types

In 1980, 12.7% of all fatal crashes occurred on the interstate system, 54.1% on other U.S. and state routes, and 32.9% of the fatal crashes occurred on the local and county trafficways.

TABLE SIX

Percent of Total Fatal Crashes
by Class of Trafficway

Year	Interstate	Other U.S. & State Routes	County, Local & Other Roads	Total Fatal Crashes
1973	16.2%	56.4%	27.4%	303
1974	13.2%	53.4%	33.4%	204
1975	18.5%	47.1%	34.4%	245
1976	18.5%	44.2%	37.3%	225
1977	20.9%	47.4%	31.7%	310
1978	18.8%	50.3%	30.9%	315
1979	18.2%	44.1%	37.7%	287
1980	12.7%	54.1%	32.9%	292

IV. ACCIDENT SUMMARY

Vehicle Types

In 1980, the number of trucks over 10,000 lb. gross vehicle weight showed a decreased involvement in fatal crashes compared to the previous three years (1977-1979). The proportion of vehicles involved in fatal crashes which were motorcycles was considerably higher in 1980, compared to the years since 1973.

TABLE SEVEN

Percent of Vehicle Types
in Fatal Crashes

Year	Auto	Pickups Vans and 4-Wheelers	Motor-cycles	Trucks Over 10,000 GVW	Buses, Equipment and Other Vehicles	Total Vehicles
1973	58.5%	23.5%	6.2%	10.3%	1.7%	455
1974	52.2%	29.2%	7.6%	7.9%	3.1%	291
1975	55.5%	27.3%	6.4%	9.7%	1.1%	330
1976	57.1%	26.9%	5.8%	9.5%	1.0%	294
1977	54.3%	26.6%	5.3%	10.9%	2.9%	414
1978	52.1%	30.7%	5.0%	11.1%	1.1%	475
1979	47.1%	29.0%	7.6%	14.2%	2.1%	397
1980	50.7%	26.3%	10.8%	10.2%	2.0%	406

Residence

For 1980 fatal crashes, 20.2% of all drivers were from out of state compared to the 1973 to 1979 average of 18.3% of all drivers in fatal crashes being from out of state.

Day of Week

During the last eight years, Saturday has been the worst day of the week with 19.3% of all fatal crashes.

TABLE EIGHT

Fatal Crashes by the Day of the Week

DAY	1973	1974	1975	1976	1977	1978	1979	1980
Monday	48	27	37	29	22	41	28	39
Tuesday	42	19	36	25	35	41	37	35
Wednesday	37	22	26	23	44	33	28	36
Thursday	44	34	28	28	44	45	45	48
Friday	42	33	37	33	55	44	46	35
Saturday	51	43	46	56	57	62	55	50
Sunday	39	26	35	31	53	49	48	49
Total	303	204	245	225	310	315	287	292

Time of Day

The worst time period for fatal crashes over the last eight years has typically been in the evening, particularly during the evening rush (4:00 p.m. to 8:00 p.m.). The period of 8:00 p.m. to midnight has consistently been the second most highly represented time.

TABLE NINE

Fatal Accidents by Time of Day

	Average % of 1973 to 1977 Crashes	% of 1978 Crashes	% of 1979 Crashes	% of 1980 Crashes
Midnight - 3:59 a.m.	15.2%	12.4%	16.0%	17.8%
4:00 a.m. - 7:59 a.m.	9.3%	11.2%	10.3%	13.0%
8:00 a.m. - 11:59 a.m.	12.7%	13.7%	13.5%	10.3%
Noon - 3:59 p.m.	16.5%	18.6%	13.5%	14.4%
4:00 p.m. - 7:59 p.m.	27.8%	24.2%	22.1%	24.0%
8:00 p.m. - Midnight	18.6%	20.0%	24.6%	20.2%

Environmental Conditions

Environmental conditions were reported to have contributed to 14.4% of the 1980 fatal crashes and vehicle defects were reported to have contributed to 7.9% of the 1980 fatal crashes.

TABLE TEN

Percent of Environment and Vehicle Defect
Conditions Contributing to 1980 Fatal Crashes

	Average % of 1973 to 1977 Crashes	% of 1978 Crashes	% of 1979 Crashes	% of 1980 Crashes
Rain-fog-dust, etc.	.7%	.6%	1.4%	3.4%
Sunlight glare	.9%	0%	.1%	.7%
View blocked	.8%	.3%	.1%	.9%
Avoiding animal or other	1.9%	1.0%	1.8%	.6%
Crosswind	.2%	.6%	1.1%	.3%
Slippery surface	4.6%	4.8%	7.1%	6.5%
Avoiding holes and debris	.7%	.6%	.1%	.3%
Poor roadway & construction	.5%	.6%	2.5%	1.7%
Tires - wheels	2.0%	2.9%	2.5%	2.5%
Brake failure	1.3%	2.1%	1.4%	3.0%
Steering failure	.2%	.3%	.1%	.2%
Lights failure	.8%	1.0%	1.4%	1.5%
Other vehicle defects	.4%	1.0%	1.6%	.7%

V. PERSON SUMMARY

Under person summary, four groups will be considered. They are pedestrian, bicyclists, motorcyclists and other drivers and passengers. Profiles of each person type have been analyzed to determine problem areas.

Drivers

This is the largest group of person types involved in crashes. During the previous years, 38% of the drivers involved in fatal crashes were under 25 years of age. Since this age group of drivers makes up 29.0% of the licensed drivers in Utah, they are overrepresented in fatal crashes. Younger males make up 16.0% of the licensed drivers, but are involved in 33.6% of the fatal crashes, showing even greater over-involvement.

TABLE ELEVEN

Age of Drivers in 1980 Fatal Crashes

Age	1979 % of Drivers	1980 % of Drivers
15 - 17	9.8%	8.9%
18 - 20	13.9%	13.5%
21 - 23	14.6%	12.1%
24 - 26	11.4%	10.3%
27 - 29	9.1%	8.9%
30 - 39	15.7%	17.5%
40 - 49	10.1%	10.6%
50 above	15.4%	17.5%

Passengers

Passengers in vehicles make up the second largest group of person types involved in fatal crashes. Passengers rarely contribute to crash occurrence. The majority of passengers (61.7%) are front seat passengers in automobiles, pickups, vans, and trucks. Passengers rarely use seatbelts. Only 1.4% of the passengers involved in 1980 fatal crashes were using seatbelts. It is clear that there is a substantial potential for injury severity

reduction by increasing seatbelt usage among vehicle passengers.

In 1980, there were 355 vehicle passengers involved in fatal crashes, 105 (30%) of which were fatally injured.

Pedestrians

There were 49 pedestrian traffic deaths in 1980. This figure represents a 30% decrease in pedestrian deaths over 1979 (70 deaths). The majority of the pedestrian accidents in 1980 occurred in the urban areas along the Wasatch Front. The pedestrian most often contributes to the accident by crossing improperly when the visibility is low due to darkness.

For the most part, pedestrain accidents occur at low speeds in shopping and residential areas.

The majority of the decrease in 1980 pedestrain deaths are among the elderly.

TABLE TWELVE

Pedestrian Fatalities

1979	1980	Accident Spot Facts
49%	55%	In Salt Lake County
30%	19%	In Weber, Davis and Utah Counties
25%	17%	Between 5:00 p.m. - 6:59 p.m.
78%	79%	In urban areas
57%	36%	On local roads
98%	96%	On roadway (as opposed to sidewalk or shoulder)
81%	62%	Not physically divided roadway
59%	68%	On roadways with a posted speed of 40 mph or less
81%	92%	In dry weather
91%	83%	No traffic controls present
62%	60%	Dark
70%	87%	Clear weather
6%	4%	Hit and run
24%	34%	In shopping areas
42%	36%	In residential areas
23%	11%	On Saturdays
48%	57%	Investigated by local police

TABLE THIRTEEN

Pedestrian Fatal Accidents

1979	1980	Driver Spot Facts
94%	94%	Utah Drivers
50%	41%	Traveling 40 mph or less
93%	94%	Traveling straight
10%	39%	Drove recklessly
13%	4%	Failed to yield
9%	8%	Were speeding
9%	10%	Were drinking
55%	45%	Were under 25 years of age

TABLE FOURTEEN

Pedestrians Killed

1979	1980	
13%	8%	Age 4 and under (preschool)
9%	16%	Age 5 - 12 (elementary)
6%	4%	Age 13 - 15 (junior high)
12%	4%	Age 16 - 18 (high school)
16%	16%	Age 19 - 25
16%	33%	Age 26 - 60
28%	18%	Age 60 and above
74%	65%	Male
12%	18%	In a crosswalk
87%	82%	Not in a crosswalk nor at an intersection
30%	27%	Drinking with an average BAC of .13
20%	20%	Ran into the roadway
43%	51%	Crossing improperly

Bicyclists

In 1980, there were 7 bicyclists killed as was the case in 1979. In 1980, one was 2 years old, two were 12 years old, one was 20 years old, one was 23 years old and one was 24 years old, five were male and two were female. Over the last seven years, the large majority of the bicyclists killed have been young people. Bicyclists contributed to the crash in four fatal cases during 1980. Three were crossing improperly and one was wearing dark clothing.

Motorcyclists

Motorcycle crashes occur predominantly in urban areas (about 69% urban locations). About half occur on the state road system and the remainder occur on local roads and streets. About 39% of motorcycle crashes occur at intersections and most are angle collisions with another vehicle. Motorcyclists contribute to crash occurrence in more than eight of ten accidents (85%). The most common contributing factors are reckless driving (42.5%), speeding (42.5%), and drinking (25%). Environmental factors contribute to less than one-tenth of motorcycle crashes (7.7%). The most common such contributing factors are avoiding another vehicle (2.6%), road maintenance (2.6%). About three-fourths of motorcycle crashes involve collisions; 72% involve another vehicle and 15% involve a fixed object collision.

The motorcyclists involved in Utah crashes are predominantly young with little total driving experience, less motorcycle driving experience, and the majority have had less than one year experience on the motorcycle involved in the crash.

A study done in 1978 indicates motorcyclists wore helmets an average of 34% of the time on Utah's highways. In 1980, there were 44 motorcyclists killed, of which only 5 (11%) were wearing helmets.

Seatbelts

Drivers involved in fatal crashes during 1980 were using seatbelts in 3.7% of the cases. Of the drivers killed, only .6% were using seatbelts. Analysis of the effect of using such equipment shows that significant reductions in injury severity (-40%) can be expected from the use of seatbelts, shoulder harness, or helmets (for motorcyclists). Seatbelts reduce injury severity. Of all 761 drivers and passengers in 1980 fatal crashes, 715 (94%) were not wearing seatbelts. Of the 20 persons wearing seatbelts during a fatal crash, 2 (10%) were killed. Of the 758 persons not wearing seatbelts, 259 (34%) were killed.

VI. DRIVER CONTRIBUTING FACTORS

Summary

In Utah, the predominant cause of fatal crashes is driver behavior. In 1980, speeding was a leading contributing circumstance of fatal injuries in traffic crashes (32%). Drinking is noted as a contributing factor for about 31% of the drivers at the time the accident report is completed. A total of 42% of the crashes were alcohol related in which at least one driver or pedestrian had been drinking.

TABLE FIFTEEN

Fatal Crash

Driver's Contributing Circumstances

Year	Speeding	Drinking	Reckless	Wrong-Way Travel	Failure To Yield	Drowsy/ Asleep
1973	27.0%	16.7%	17.8%	11.4%	7.7%	7.0%
1974	28.8%	24.1%	13.4%	15.9%	8.6%	5.4%
1975	27.9%	19.1%	19.1%	14.0%	6.7%	5.4%
1976	29.1%	21.3%	21.1%	11.8%	8.5%	6.5%
1977	32.9%	20.1%	21.0%	10.1%	7.7%	8.5%
1978	31.3%	24.1%	11.4%	11.4%	9.7%	7.8%
1979	32.2%	27.3%	12.9%	9.0%	9.5%	5.1%
1980	32.3%	30.8%	23.6%	11.6%	7.4%	6.2%
Average	29.9%	22.9%	18.8%	11.9%	8.2%	6.5%

Speed

In Utah, the most often noted contributing factor for drivers involved in fatal crashes is excessive speed. Out of state drivers are over-represented among the group of drivers traveling at excessive speed at the time of involvement in fatal accidents. During 1980, out of state drivers accounted for 20% of the drivers involved in fatal crashes, but 24% of the speeding drivers were not Utah residents. Drivers with a previous suspension on their driving record are more likely to be involved in fatal crashes while speeding than are those without a suspension on record. During 1980, 8%

of the drivers involved in fatal crashes had their license suspended or revoked, while speeding drivers involved in fatal crashes have had a previous suspension or revocation 12% of the time. Drivers with a previous DUI conviction on record are over-involved in fatal crashes involving speed. A total of 5.7% of the drivers involved in fatal crashes in 1980 have a previous DUI on record, while 9.9% of those speeders involved in fatal crashes have had a previous DUI conviction.

Approximately half of the drivers contributing to 1980 fatal crash occurrences (48.1%) by excessive speed were under 25 years of age. Since these young drivers were involved in 38.2% of the total fatal crashes in Utah during 1980, they are over-represented in the speed related category of crashes. In 1980, 61.8% of the fatal crashes involving excessive speed have occurred in rural areas, and 67.5% have occurred on the state road system. About three-fourths of the speed related fatal crashes in 1980, (72%) were single-vehicle crashes, and over half (52.3%) of these single vehicle fatal crashes resulted in overturns. Less than half (38.2%) have occurred during daylight hours during 1980. More than four of five speed related crashes occur at non-intersection locations (74%). During 1980, speeding at all speeds was reported to have contributed to nearly one-third (32%) of all fatal crashes. In 1980, 20% of all fatal crashes involved a vehicle traveling over 55 mph.

Of the crashes in which there was a vehicle traveling over 55 mph, 77% were in rural areas, 46% resulted in a vehicle overturn and 80% were on the interstates or other state routes.

Alcohol

Accident records reveal that 38% of all alcohol related fatal crashes occur between 10:00 p.m. and 2:00 a.m., and 66% occurred during night-time hours. In all alcohol related crashes, 35% of the vehicles were traveling over 55 mph.

The vehicles tend to be older and 30% of them were pickup trucks in 1980 alcohol related crashes. The drivers in 1980 alcohol related crashes were young; 68% were under 30 years old and 26% were under 21.

An analysis of drinking driver profiles compared to non-drinking driver profiles shows that unlicensed drivers, young male drivers, and speeding drivers are over-represented in the drinking driver population. It was also found that 16.8% of the drinking drivers involved in 1980 fatal crashes had at least one previous DUI conviction on record. Drinking drivers were involved in 1980 pedestrian fatal crashes in 7% of the cases. During the previous years, 65.9% of alcohol related fatal crashes have been single vehicle crashes, and 26.8% of the crashes resulted in overturns. About one-half (53.7%) of the alcohol related fatal crashes occur in rural areas, and 25.2% occur on the local road system. More than four of five alcohol related crashes occur at non-intersection locations (69.1%), and as expected 44.7% occurred on Saturday or Sunday.

Reckless Driving

In 1980, 23.6% of the drivers contributed to the fatal crash through reckless driving. Reckless driving is difficult to define precisely; it is a catch-all for many types of dangerous driving maneuvers. Since this term is often used to describe driver contributing factors, it should be addressed in terms of problem identification.

Those who contributed to fatal crash occurrence in the previous years by driving recklessly did not have a different driving history than other types of drivers in terms of license status, previous accidents, previous suspensions or revocations, previous DUI convictions, or previous speeding convictions. Younger drivers (25 years of age or less) were over-represented in the reckless driving population.

Forty-five percent reckless driving maneuvers which contributed to fatal crash occurrence in Utah in 1980 occurred in rural areas, and (54.3%)

occurred on state roads. About (33.3%) involved another vehicle, (22.5%) were overturns, and (14.%) involved pedestrians. Reckless driving related fatal crashes (65.1%) occurred at non-intersection locations. One-half occurred during daylight hours.

Failure to Yield

During 1980, 10.3% of the fatal crashes were contributed to by one or more of the drivers failing to yield the right of way. Of the 1980 fatal crashes contributed to by FTY, 77% were in urban areas and 40% were on local roadways. Of those not given the legal right of way, 2 were pedestrians, 2 were railroad trains, and 25 were other roadway vehicles plus one pedalcyclist. Of the 1980 traffic control violations in FTY fatal crashes, 13% were light signals, 43% were stop signs, and 7% were railroad crossing controls. Of the vehicles in 1980 FTY fatal crashes, 37% were traveling 25 mph or slower.